



The ecological townhouses in Geuensee near Sursee/LU.

Townhouses in Geuensee/LU

Installed with Cupress, Optipress and Optiflex ...

... including Nussbaum building valves. «We really believe that Nussbaum has the largest product range», explains plumbing company proprietor Erich Troxler, «and Cupress is ideal for solar heating installations».



Maximum economic and ecological benefit

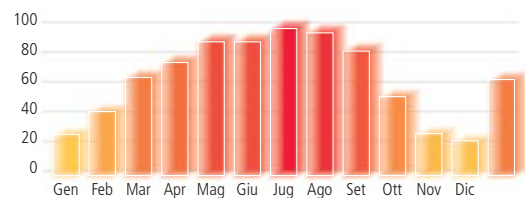
Architect Peter Lauber is convinced of the environmental benefits of solar energy, which is why he specifies solar heating installations in all the houses he builds. He wants whatever he plans and builds to reflect his know-how and sense of responsibility. The townhouses in Geuensee are constructed from prefabricated wooden components. The first phase of construction comprises four houses with 5? and 6? rooms each, spread over four floors. A similar row of houses is planned for the second phase.

In front of the houses is a relatively tall covered parking area to accommodate eight cars. Located on its flat roof are two rows of solar collectors. The covered parking area is perpendicular to the rows of houses, to keep road noise at bay and create a sheltered area behind, with a 30 meter swimming pool.

Solar collectors with a total absorption area of 22.5 m² are installed on the roof of the covered parking area.

Exploiting the sun's energy

Solar heating installations have long entered the mainstream: in countless buildings, they make a dependable and calculable contribution to the energy required for hot water or heating. On average, solar collectors totaling 22.5 m² meet 86% of the hot water needs for the four townhouses in Geuensee between April and September; under good mid-summer conditions the figure rises to 100%. Considered on an annual basis, solar energy contributes 63% of the energy needed for the hot water supply. A similar array of solar collectors will need to be installed for the second phase of construction, otherwise the contribution figures would need to be halved.



The monthly contribution made by solar energy to water heating, with a 22.5 m² collector area for four townhouses.



Piping between the collectors and the storage tank uses the Cupress installation system (shown here before lagging was fitted).

«We are happy with the advice and service we got from Nussbaum», is the verdict of everyone involved (from left): Patrick Villiger (E. Troxler), Andreas Gasser (R. Nussbaum AG), Erich Troxler (E. Troxler), Josef Bündler (plumbing engineer), architect and site owner Peter Lauber, Stefan Frey (Rüesch Solartechnik AG).



Engineering specifications

10 TERZA flat-panel thermal collectors with a 22.5 m² absorber area Inclination: 30°

Water-glycol closed circulatory system, 1 water heater with 1750 l capacity

Auxiliary oil-fired heating via a heat exchanger

0 10 20 30 40 50

Cupress – ideal for solar heating installations

Even the maze-like absorbers in the solar collectors are made of copper. The copper pipes running to and from the 1750 l hot water storage tank use Cupress, the versatile copper press-fitting installation system from Nussbaum, together with press-fittings and tapware made of special gunmetal. The solar installation itself was supplied by Rüesch Solartechnik AG of Cham, a company specializing in solar energy with 25 years' experience. Both Rüesch and plumber Erich Troxler recommend the Nussbaum Cupress system because it has proven highly suitable for solar heating installations.



The 1750 l hot water storage tank. The pipes for the closed solar circulation system, fitted using the Cupress installation system, are visible on the left. On the right are the hot and cold water pipes, fitted using the Optipress installation system.



One-stop shopping for the entire domestic water system

Erich Troxler, owner and operator of a plumbing and solar systems company in Willisau, puts it like this: «We have always been happy with Nussbaum. With the Geuensee project, we felt it was important to source the entire domestic water system, including solar installations, from the same supplier to ensure consistency and compatibility.» Erich Troxler clearly appreciates the tried and tested quality of Nussbaum installation systems, as evidenced by the Nussbaum

distributor battery in the cellar, rustproof stainless steel risers and mains pipes using the Optipress system, fittings made of special gunmetal, and final distribution on the various floors using the Optiflex system with black PE-Xc tubing for screw and press fitting.

Parties involved in construction

Site owner and architect:	Peter Lauber, dipl. Arch. ETH, CH-6232 Geuensee
Solar installation planning/delivery:	Rüesch Solartechnik AG, CH-6330 Cham
Plumbing engineer:	J. Bündler, installation engineering, 6280 Hochdorf
Solar, plumbing and heating installations:	Erich Troxler, plumbing/solar systems/heating, CH-6130 Willisau
Start of construction:	October 1999
Completion:	May 2000
2nd terrace completion:	Spring 2001



R. Nussbaum AG

Manufacturer of fittings and systems for sanitary installations

Martin-Disteli-Strasse 26
Postfach

CH-4601 Olten

Tel. 062 286 81 11

Fax 062 286 84 84

info@nussbaum.ch

www.nussbaum.ch

Branches in Basle, Berne, Biel, Brig, Carouge, Crissier, Dornbirn, Giubiasco, Kriens, St. Gall, Trimbach, Zurich